

**Robert J. Medler**  
**Director**  
**Remedium Group, Inc.**

A Subsidiary of W. R. Grace & Co.  
6401 Poplar Ave., Suite 301  
Memphis, TN 38119-4840

# Remedium

March 26, 2008

U.S. Environmental Protection Agency  
EPR-SR  
1595 Wynkoop Street  
Denver, CO 80202

Tel: (901) 820-2024  
Fax: (901) 820-2061  
Email: [Robert.J.Medler@grace.com](mailto:Robert.J.Medler@grace.com)

Attn.: Ms. Bonita Lavelle

**Subject: Proposed Approach for Surface Water Monitoring  
Element 2 of OU3 Phase IIA RI/FS  
Libby Asbestos Superfund Site**

Dear Bonnie:

This letter presents Remedium Group's approach to stream flow monitoring specified under Element 2 of the Sampling and Analysis Plan (SAP) for the Phase IIA Remedial Investigation/Feasibility Study (RI/FS) at OU3 of the Libby Asbestos Superfund Site, and is a summary of the approach discussed during our teleconference call with EPA, NewFields, SRC and MWH on March 20, 2008.

Element 2 of the Phase IIA RI comprises weekly stream flow gauging and collection of surface water samples for asbestos analysis from the following nine flowing stream locations (see Figure 1):

- URC-1A
- URC-2
- LRC-1
- LRC-2
- LRC-6
- FC-2
- TP-TOE1
- TP-Overflow
- CC-2

Element 2 also includes collection of surface water samples for asbestos analysis from the following three non-flowing surface water locations (see Figure 1):

- Mill Pond
- Tailings Pond
- Carney Creek Pond

As discussed in the SAP, the purpose of Element 2 gauging and sampling is to characterize stream flow rates and asbestos concentrations in surface waters of the Rainy Creek basin during the 2008 spring runoff period. As specified in Section 5.1.2 of the final SAP (dated March 20, 2008), Element 2 is to include a "winter base-flow" round of gauging and sampling, with weekly monitoring to begin when stream flow rates start to increase in response to rising temperatures and increased snowmelt.

Based on observations made during a visit to the OU3 site on March 13, 2008, snow cover is already gone from many of the south-facing slopes in the Rainy Creek basin. Because it is probable that stream flows have already increased from "winter base-flow" conditions, collection of the winter base-flow round will not be possible this season.

For the weekly Element 2 monitoring, Remedium Group proposes to use portable "H" flumes to measure stream flows at the nine stream locations. "H" flumes are a hybrid between a v-notch weir and a flume, and were developed by the U.S. Forest Service for use in measuring stream flows that vary widely, such as with seasonal runoff and dam overflow. Three different sizes of "H" flumes are proposed for use in Element 2 monitoring at OU3, as summarized on Table 1 (attached). The portable flumes will be installed with sandbags, and will require only minimal disturbance of the stream channel at each location (see Figure 2). We have located a supplier who can fabricate the "H" flumes and deliver them to Libby no later than April 15, 2008.

Once the portable flumes are received, weekly monitoring will commence at each of the nine flowing surface water locations. Weekly monitoring will be performed until four weeks after peak snowmelt runoff occurs, at which time Element 3 monitoring will commence, with measurements and samples being collected on a two-week frequency at each of the locations until September 30, 2008.

As discussed in Section 5.1.4 of the SAP, as part of Element 4 of Phase IIA, continuous flow monitoring is required at three of the Element 2 gauging stations (LRC-2, LRC-6 and CC-2). At each of these three locations, a Parshall flume with a stilling well, flow sensor, and datalogger will be permanently installed. Autosamplers will also be installed at stations LRC-2 and LRC-6. Figures 3a and 3b are schematics of the Parshall flume installations. Two different sizes of Parshall flumes are proposed for use in Element 4 monitoring at OU3, as summarized on Table 1.

To provide high-quality data, it will be necessary to temporarily divert stream flow around stations LRC-2, LRC-6 and CC-2 and to construct a smooth run-up channel and to install concrete foundations into which the flumes will be mounted. As noted during the March 13, 2008 site visit, construction access to the LRC-2, LRC-6 and CC-2 sites (see attached Photographs 1, 2 and 3) will not be possible until snow cover has melted and the ground has dried sufficiently to allow equipment (a backhoe and concrete truck) to operate. We have located a supplier who can fabricate the Parshall flumes and deliver them to Libby no later than April 25, 2008; if conditions at that time permit, it is anticipated that the Parshall flumes can be

installed and operational in approximately two weeks. The temporary flumes will be used at these three locations until the permanent installations are complete.

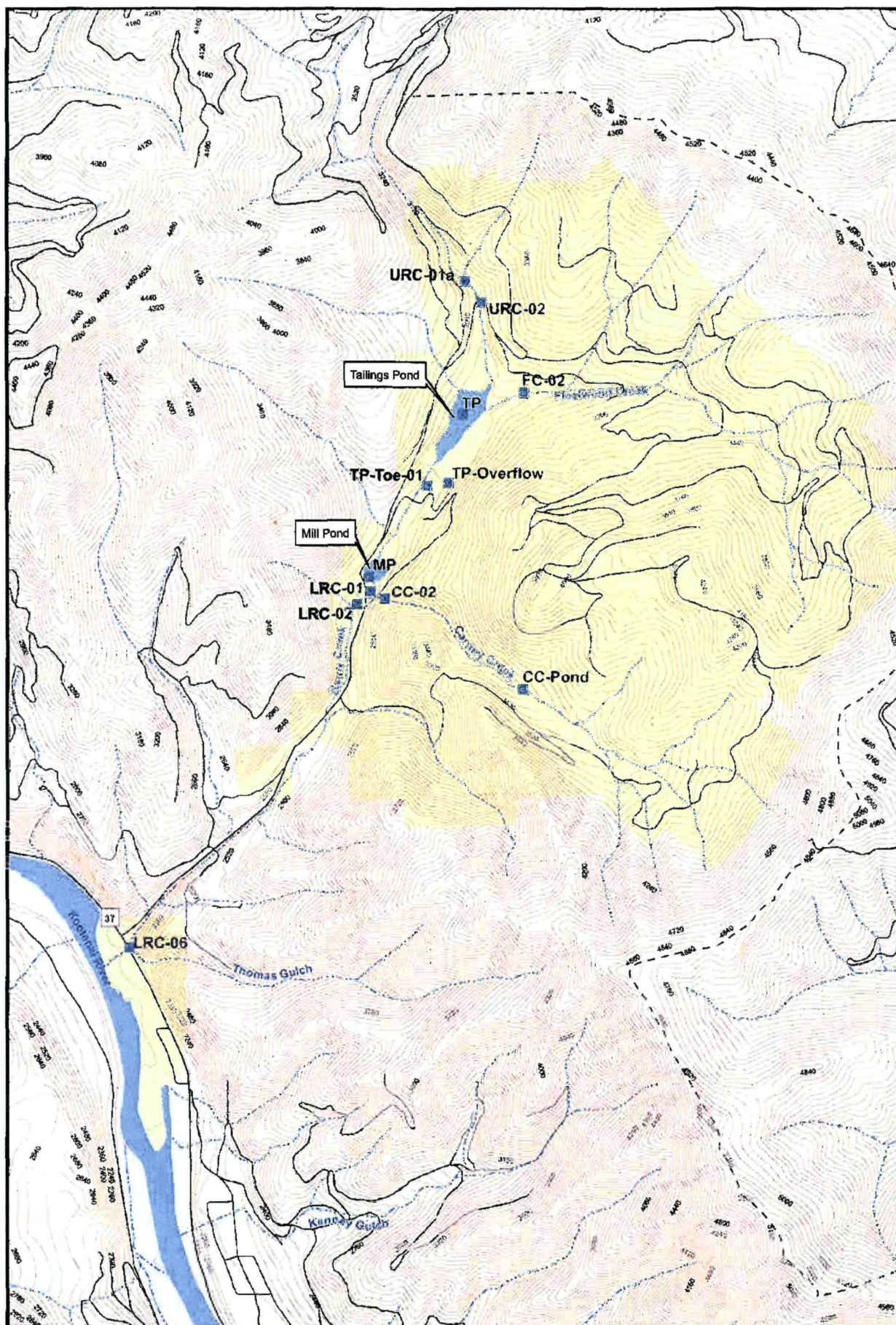
Remedium Group realizes that time is of the essence; if EPA concurs with our approach, we are prepared to immediately place orders for the equipment and instrumentation described herein. As required in the Phase IIA SAP, Remedium Group will submit details of the installations (including specifications, conceptual drawings and operation/maintenance instructions) to EPA and MDEQ for review and approval before field implementation. If you have any questions regarding this proposed approach, please call Bob Marriam at (901) 820-2023.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert J. Medler", with a stylized flourish at the end.

Robert J. Medler  
Project Coordinator  
Remedium Group, Inc.





**Scale**  
1 inch equals 2,000 feet

Legend	
<span style="color: blue;">■</span> Surface Water Gauging and Sampling Locations	<span style="color: blue;">■</span> Lakes
<span style="color: black;">—</span> Roads	<span style="color: black;">- - -</span> Trails
<span style="color: black;">—</span> 40-ft Elevation Contours	<span style="color: blue;">—</span> Streams
	<span style="background-color: yellow;">■</span> Former Mine Property

**Figure 1**  
**Surface Water Gauging and Sampling Locations**  
LIBBY ASBESTOS SUPERFUND SITE  
OUS PHASE IIA REMEDIAL INVESTIGATION



**MWH**  
3/25/2008

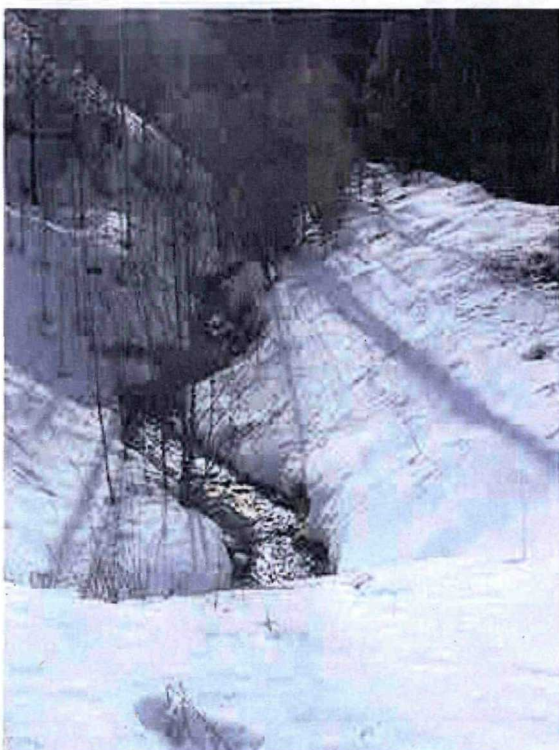




Photograph 1. View to north, up Rainy Creek near gate of OU3, in vicinity of LRC-06.



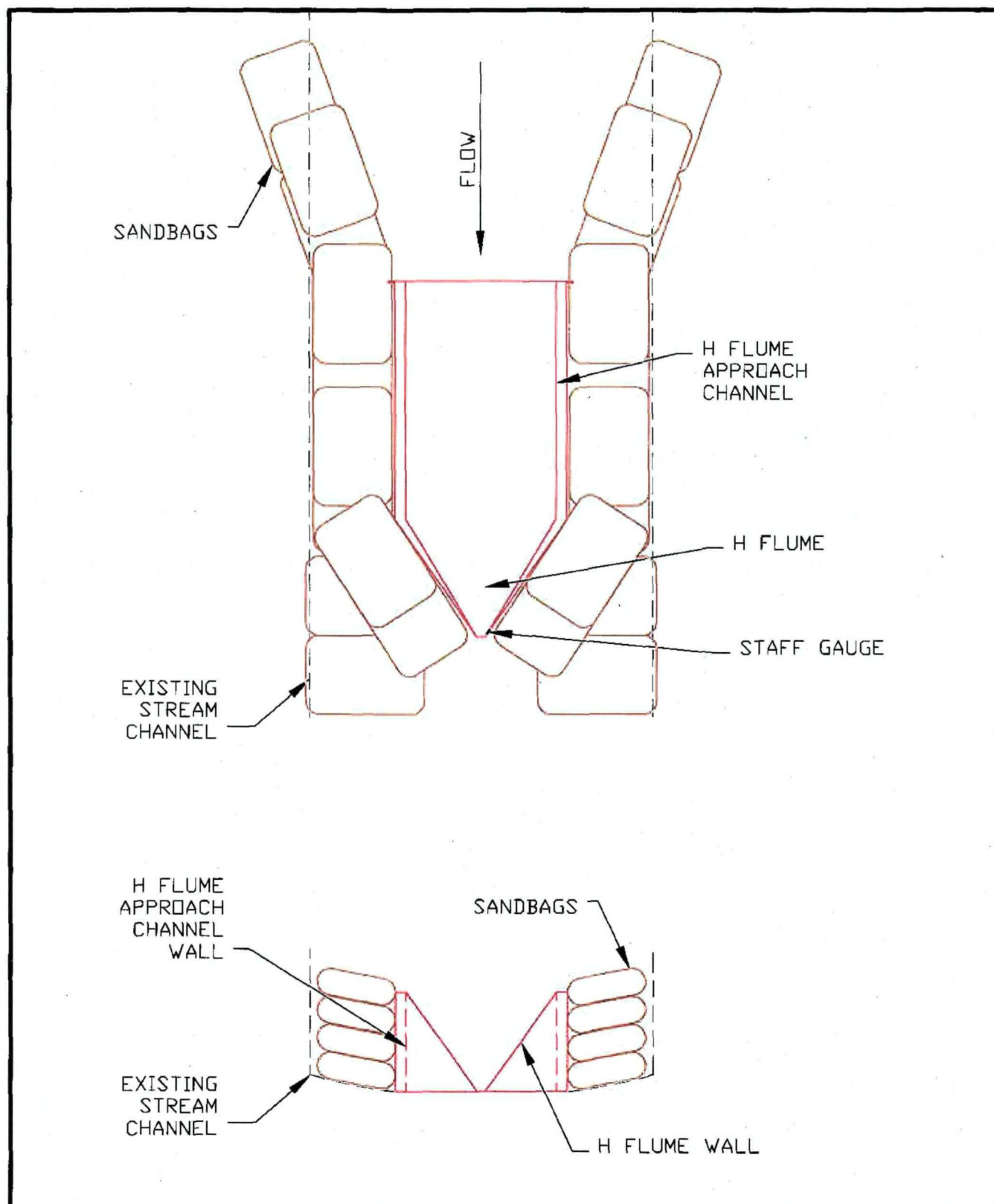
Photograph 2. View to west, of Rainy Creek just downstream of the confluence with Carney Creek, in vicinity of LRC-02.



Photograph 3. View to east, up Carney Creek, upstream of confluence with Rainy Creek, in vicinity of CC-02.

PROJECT NO. 1005439.010106 Photos.indd 03/24/08 SLC

**LIBBY ASBESTOS SUPERFUND SITE  
OU3 Photographs  
March 13, 2008**



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			PROJECT No.:		
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			FIGURE 1		

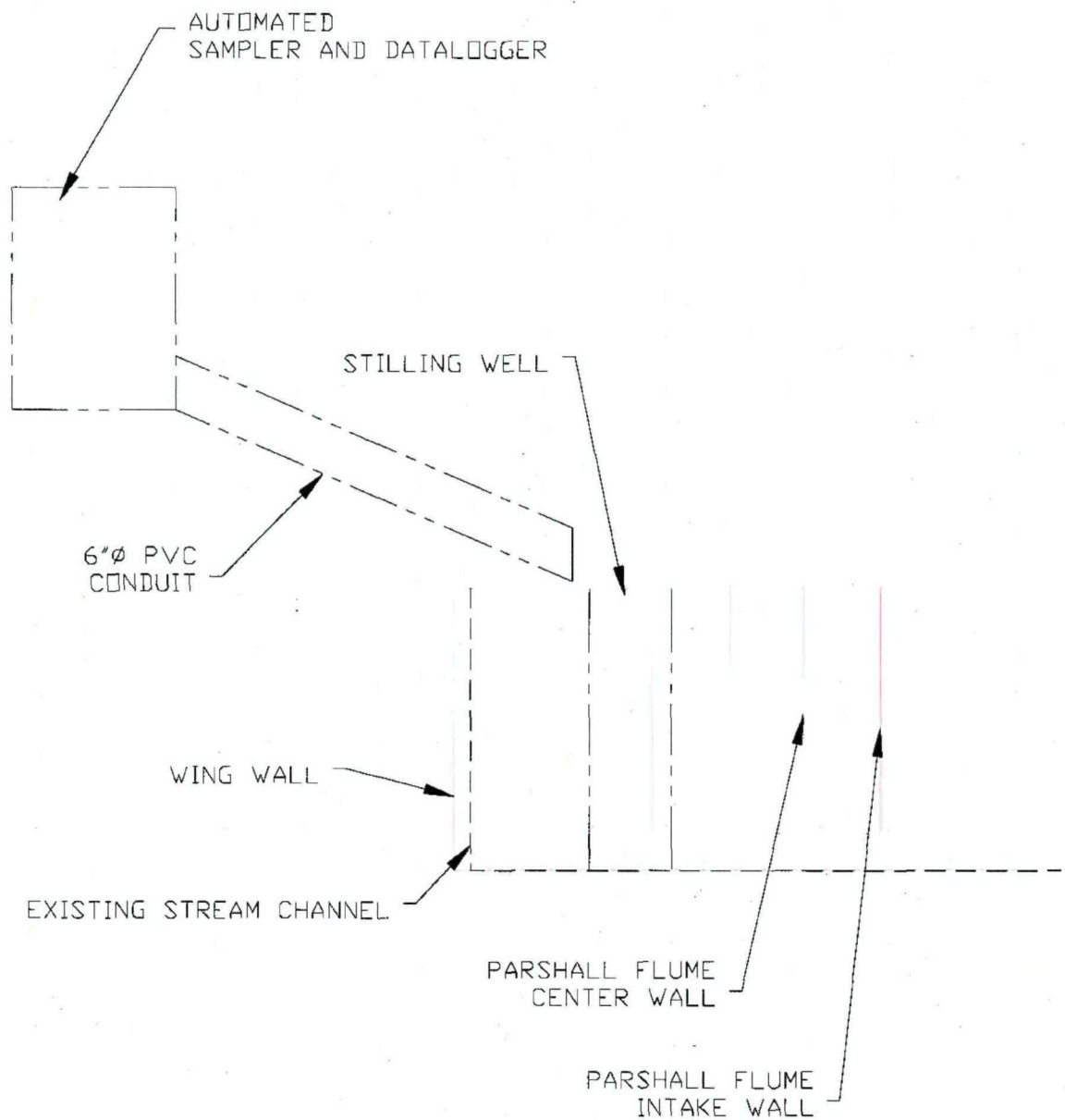



**MWH**

LIBBY ASBESTOS SUPERFUND SITE  
DU3 PHASE IIA REMEDIAL INVESTIGATION

H FLUME INSTALLATION DETAILS

Station	Oct. 2007 Flow (gpm)	"H" Flume size	"H" Flume Range (gpm)	Parshall Size	Parshall Flume Range (gpm)
URC-1A	39.2	0.5	0.18 - 149		
URC-2	0.2	0.5	0.18 - 149		
LRC-1	184	1.0	0.31 - 862		
LRC-2	224	1.0	0.31 - 862	6-inch	24 - 1,754
LRC-6	184	2.0	0.63 - 4,928	9-inch	40 - 3,981
FC-2	0	0.5	0.18 - 149		
TP-Toe1	132	1.0	0.31 - 862		
TP-Overflow	na	0.5	0.18 - 149		
CC-2	84.4	1.0	0.31 - 862	6-inch	24 - 1,754

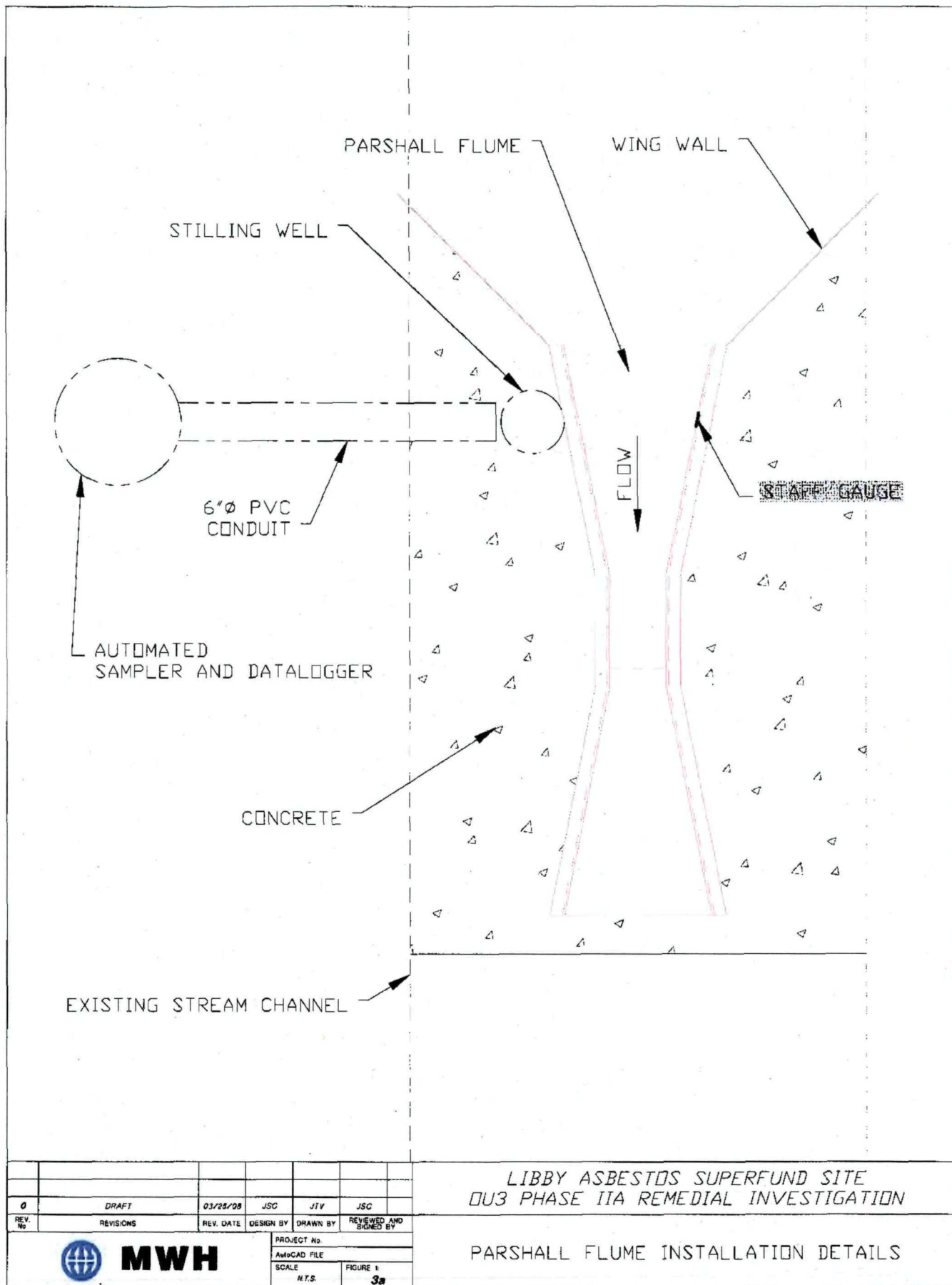


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			FIGURE 1: 3b		

LIBBY ASBESTOS SUPERFUND SITE  
DU3 PHASE IIA REMEDIAL INVESTIGATION

PARSHALL FLUME INSTALLATION DETAILS





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		PROJECT No.			
		AutoCAD FILE			
		SCALE N.T.S.			
		FIGURE 1			
		3a			